Oral Statement

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U.S. Energy Information Administration
Committee on Commerce, Science and Transportation
Subcommittee on Aviation
United States Senate
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Mr. Chairman and Members of the Committee:

I appreciate the opportunity to appear before you today to discuss recent developments in energy markets and the impacts of Hurricane Katrina on jet fuel supply and prices.

The Energy Information Administration (EIA) is the independent statistical and analytical agency in the Department of Energy. We do not promote, formulate, or take positions on policy issues.

Hurricane Katrina has wrought incredible devastation on the central Gulf Coast, most importantly in terms of human suffering, but also in economic impacts that have spread well beyond the stricken area. The oil and gas industry, with many facilities in the direct path of the hurricane, incurred significant losses in production and processing capacity, of which some were temporary, but others will continue to affect output for many months to come.

Even before Hurricane Katrina struck on August 29th, crude oil and petroleum product prices were setting records. On August 26, the near-month price of crude oil on the New York Mercantile Exchange closed at over $66 per barrel, which was $23 per barrel, or more than 50 percent,

higher than a year earlier. Over the same one-year period, retail gasoline prices had risen 74 cents per gallon, retail diesel fuel prices 72 cents, and spot jet fuel prices between 69 and 77 cents per gallon. Oil prices worldwide had been rising steadily since 2002, due in large part to growth in global demand, which has used up much of the world's surplus production capacity. Refineries have been running at increasingly high levels of utilization in many parts of the world, including the United States.

Hurricane Katrina shut down virtually all offshore oil production in the Gulf of Mexico, along with eight major and several smaller refineries, import facilities including the Louisiana Offshore Oil Port, and several major crude oil and petroleum product pipelines. At its peak impact, over 25 percent of U.S. crude oil production, 20 percent of crude imports, and 10 percent of domestic refinery capacity was shut down.

Many of these facilities have since restarted, but about 860 thousand barrels per day of crude oil production remains offline, along with four major refineries with a total distillation capacity of 880 thousand barrels per day. At their historical yields, these four refineries produce approximately 120 thousand barrels per day of jet fuel, accounting for 8 percent of total U.S. jet fuel production of 1.6 million barrels per day. Jet fuel consumption, measured as product supplied, also averages about 1.6 million barrels per day, so there is a relatively close balance between production and consumption. With 42 gallons in a barrel, a 50-cent-per-gallon change in jet fuel prices translates into a change of roughly $30 million in daily jet fuel expenditures for the nation as a whole, not considering the ameliorative effects of any hedges or long-term contract arrangements.

In the immediate aftermath of Hurricane Katrina, with the extent of actual damage still largely unknown, crude oil prices rose briefly over $70 per barrel, up more than $4 in less than 48 hours, but in less than a week had fallen below their pre-storm levels. The impact on crude oil prices was undoubtedly lessened by the relatively robust inventory levels before the storm, and by quick assurance that refiners unable to obtain adequate crude oil supplies would be able to borrow by way of time exchanges from the Strategic Petroleum Reserve, even before the coordinated release of stocks by the United States and other members of the International Energy Agency was announced on Friday, September 2.

The more significant price impact, however, was on finished petroleum products. Spot prices (the level at which large volumes are sold by refiners, importers, and traders) for gasoline rose as much as $1.40 per gallon east of the Rockies within 3 days, while spot diesel fuel prices rose 35 to 40 cents, and those for jet fuel around 50 cents. Even prices on the West Coast were affected, though by lesser amounts. The sudden increase in product prices was the primary driver of an increase in the so-called "crack spread," defined as the difference between a petroleum product price and the underlying price of crude oil.

The seemingly disproportionate change in finished product prices reflects the severity and expected persistence of Hurricane Katrina's impact on refining operations in the Gulf. Additionally, the shutdown of the Capline, a major crude oil pipeline from Louisiana to the Midwest, reduced crude supplies to refineries there, causing several to temporarily reduce operations. Finally, the temporary closure of the Colonial and Plantation product

pipelines virtually halted distribution of products from the Gulf Coast to the lower East Coast, as far north as Baltimore, in the aftermath of Katrina.

While recent movements in crack spreads were heavily influenced by the effects of Hurricane Katrina, crack spreads were trending upwards well before the storm struck. As U.S. refineries have operated increasingly close to full capacity, and product demand continues to rise, the balance of demand must increasingly be made up from imports. This, in turn, requires a sufficient price differential between the United States and other world markets to attract the needed imports. Although this does not increase the cost of refining products in the United States, it does tend to increase the market value of finished petroleum products relative to crude oil.

Wholesale petroleum product prices, like those of crude oil, have fallen back from their peak levels, and as of yesterday (September 13) were near their levels before Hurricane Katrina. Spot prices for jet fuel have dropped by 54 cents on the Gulf Coast and 44 cents in New York Harbor, and stand about 1 cent under and 6 cents over, respectively, their levels on August 26, before Hurricane Katrina. Other petroleum product prices have shown similar trends, although gasoline prices have not receded as much as prices for distillate products.

Availability of fuels was another issue of some concern in the wake of Hurricane Katrina. While there were widely reported rumors of imminent outages of jet fuel at certain airports in the days following Katrina, to EIA's knowledge, no airports actually ran out of fuel.

Jet fuel inventories, which were in relatively good shape before the storm, did decline, but have remained adequate in all regions so far. In the week ending September 2, U.S. total jet fuel inventories dropped by an estimated 1.6 million barrels, or slightly less than one day's demand. The East Coast, the region most affected due to the pipeline shutdowns and its reliance on supplies from Gulf Coast refineries, accounted for nearly 1.4 million barrels of the decline, equivalent to more than two days of demand in that region. It should be recognized that supplies of all petroleum products, including jet fuel, will remain tight in the coming weeks, and possibly months, although increased imports may make up some of the overall product shortfall.

While the near-term outlook for oil markets depends on a number of factors, the rate at which refinery capacity affected by Katrina can be brought back on-line is the major factor affecting petroleum product markets. Although full damage assessments for the four refineries remaining shut down have not yet been possible, early estimates indicate that several of them may be down for months.

Even if the energy system is fully or near fully restored by December, prices for all petroleum products are likely to remain elevated. Last Wednesday, we released our monthly *Short-Term Energy Outlook*. For this *Outlook*, we considered three cases based on the speed of recovery of the energy system from the effects of Hurricane Katrina—Slow, Medium, and Fast Recovery scenarios.

In the Medium Recovery scenario, we project an average price for refiner sales of jet fuel of roughly $2.25 per gallon in September, up about 32 cents from the August level, which declines to about $2.10 per gallon by

December. This September price would be about 94 cents per gallon higher than the same month a year ago, while that in December would represent a year-to-year increase of about 79 cents per gallon.

In line with the impacts seen already in September, and a significant portion of Gulf Coast refinery capacity expected to remain offline well into the fourth quarter, EIA's Short-Term Energy Outlook also reflects our expectation for lower refinery production, lower inventories, and a need for greater imports of jet fuel in the remainder of 2005.

This concludes my statement, and I will be happy to answer your questions.